

MAJER, V.; JURKOVIC, I.

Diorites of Bijela Gromila south of Travnik in the middle Bosnian mountains. p. 129.

GEOLOSKI VJESNIK. (Zavod za geoloska istrazivanja Hrvatske i Hrvatsko geolosko drustvo) Zagreb, Yugoslavia. Vol. 11, 1957 (published 1958)

Monthly list of East European Accessions (EMAI) IC, Vol. 8, no. 8, Aug. 1959

Uncl.

MAJER, Vladimir

Rhyolite (quartz porphyry) of the Vranica Range and
albite-rhyolite (quartz keratophyre) from Sinjakovo in the
central Bosnian ore region. Ivan Jurkovic and Vladimir
Majer (Univ. Zagreb, Yugoslavia). *Vestnik savez. geol.
geophys. istr.* *Srbija* 11, 207-33 (in German, 225-33)
(1964). Petrographic data are given with client analyses
of 3 rocks. Michael Fleischer.

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have not been published in Volume I are presented. The following scientists participated in the opening of the Congress: Professor Wiltor Kemula, Dean of the Faculty of Sciences, Warsaw; Doctor Jaromir Dolansky, Minister of Planning; Professor Jaroslav Herovsky, Chairmen of the Congress; and Professor Jaroslav Fukatko, Chairman of the Center for Scientific Research and Technical Development. References follow each paper.

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Majer, UL.
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PHASE I BOOK EXPLOITATION

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International Polarographic Congress. 1st, Prague, 1951

Sborník I. Mezinárodního polarografického sjezdu. Díl 3: Hlavní referáty přednesené na sjezdu. Proceedings...Vol 3: Reviews Read at the Congress. Praha, Přírodovědecké vyd-ví [1952] 774 p. 2,000 copies printed.

Resp. Ed.: Jiří Koryta, Doctor; Chief Ed. of Publishing House: Milan Skalník, Doctor; Tech. Ed.: Oldřich Dunka.

PURPOSE: The book is intended for chemists, chemical engineers, and physicists.

COVERAGE: The book is a collection of reviews and original papers read at the International Polarographic Congress held in Prague in 1951. Uses of polarography in organic and inorganic analysis, biochemistry, medicine, and industrial chemistry are discussed. In this section, Reviews Read at the Congress, Russian and either German or English translations of each review are presented. In the section, Original Papers Read at the Congress, only those translations in Russian, German, and English which

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MAJER, V.

Czechoslovakia CA: 47:12136

Polarograficke rozbery.

Prague: Tech.-vedeckekeho vydavatelstvi. 1952. 196 pp. Kcs. 120.

Reviewed in Chem. Listy 47, 947-2 (1953).

~~VIADIMIR, M.~~
MAJER, Vladimir

YUGO . VIADIMIR, M.

Garnet from the Mesovite strata, Eastern Bosnia,
Vladimir Majer (Mineralog. Inst., Zagreb, Yugoslavia).
Geol. Pisanje, 870-2 (1951-53) (Pub. 1954) (German sum-
mary). -- Yellow-green garnet from limestones near the con-
tact with andesite contained SiO_2 84.91, Al_2O_3 0.69, Fe_2O_3
30.40, MgO 0.68, CaO 43.20, H_2O 0.19, sum 99.97%. Sp.
gr. is 8.712. Michael Fleischer

CA

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Identification limit in the polarographic method
Vladimir Majer (Tech. Univ., Prague, Czech.). *Chem
Listy* 45, 62-4 (1951). - When the polarographic method is
applied to small samples (0.005 ml.) the results may be in-
fluenced by the small surface of the reference electrode,
small vol. of the sample, and compn. of the walls of the con-
tainer. Abs. amts. of 1-0.1 % may be detd. by the polaro-
graphic method. M. Hudlicky

1951

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400027-6

14919* Titrimetric Determination of Small Amounts of Thorium in the Presence of Uranium. (In English.) V1
Majer and M. Cejpkova. *Collection of Czechoslovak Chemical Communications*, v. 15, no. 12, 1951, p. 874-880

CA

7

Manganometric determination of small amounts of thorium. A. Majer (Tech. Univ., Prague): *Chem. Listy* 54, 68-70 (1950). To 5 ml. soln. contg. 0.3-30 mg. ThO₂, add 5 ml. 2 N HNO₃, heat on a steam bath, and add dropwise 5 ml. of a satd. soln. of C₂H₅O₂. Continue the heating 1-2 hrs., allow to stand a few hrs. at room temp., filter, wash the ppt. 4 times with 15-ml. portions of water contg. 0.5 ml. 2 N HNO₃ per 100 ml. Dissolve the ThC₂O₄ in 5 ml. 2 N H₂SO₄, and titrate with 0.01 N KMnO₄ at 90°.

M. Hrdlický

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Chlorination of stibnite. J. Sedláček and V. Majer
(Tech. Univ., Prague). *Chem. Listy* 44, 66 S(1950).
Crude stibnite was chlorinated at 250° to produce anhyd.
SbCl₃. The isolation of SbCl₃ from S₂Cl₂ by distn. was not
successful, and the yield of SbCl₃ was low. Chlorination
of Sb₂S₃ in an aq. medium was unsuitable for the production
of the anhyd. compd. The best yields (83%) were ob-
tained by chlorination in CHCl₃ soln., in which SbCl₃ is
but slightly sol.
M. Hudlický

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Determination of small amounts of thorium in the presence of uranium. V. Majer and M. Cejpková (Tech. Univ., Prague). *Collection Czechoslov. Chem. Commun.* 15, 874-89 (1950) (in English).—Th oxalate is pptd. from 0.02 M HNO_3 0.3 M $\text{H}_2\text{C}_2\text{O}_4$ soln., digested overnight, washed with 0.01 M HNO_3 , and redissolved in 2 N H_2SO_4 . The resulting soln. is titrated with KMnO_4 . I. Mentis

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Explosions in laboratories produced by chloric acid
Vdau. M. et. *Chemie* (Prague) 3, 90 (1948). The re-
corded explosions of HClO_3 have been due to the formation
of explosive compds. with Bi, Sb, NH_3 , and org. substances.
Explosions produced by Fe were due in part to the liberated
H.

Frank Marsh

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Laboratory (C.A. 28, 20355) have developed a gravimetric procedure in which ppt. are collected on a cotton filter, dried in a stream of air at a definite temp., and weighed. Ca's procedures were tested for detg. small quantities of Ca^{2+} , SO_4^{2-} , Pb^{2+} , and PO_4^{3-} . In detg. 5-20 mg. of Ca, the results were fairly good, as was true of Pb and SO_4 ; with PO_4 serious errors resulted. The conclusion is that the procedure is useful in some cases and not as worthless as some have claimed nor as reliable as others have thought. W. T. Hall

W. T. Hall

1ST AND 2ND ORDERS		3RD AND 4TH ORDERS	
COMMON ELEMENTS		COMMON SYMBOLS INDEX	
<p><i>pd</i></p> <p>PROCESSES AND PROPERTIES INDEX</p> <p>The catalytic effect of the most minute quantities of mercury during the oxidation of hydrogen in concentrated sulfuric acid. Vladimir Majer, <i>Chem. Listy</i> 34, 85-9 (1940).—A micro app. is described for studying the oxidation of H (300 cc. per hr.) in 1 cc. of concd. H_2SO_4 in the presence of 0.00-5 g of Hg. The reduction of H_2SO_4 by the H began to occur in the range 215-225°; all studies were made at 220°. In the presence of 0 to 1 g of Hg the catalytic effect of the Hg was a linear function of the concentration of the Hg; in the presence of 1 to 5 g of Hg the catalytic effect of the Hg increased slowly for increases in Hg. The small app. enabled a study of the effect of quick or sudden temp. changes, small vols. of reagents, rapid changes in reagents, etc., upon the oxidation of H; these factors could not be studied in previous work with large vols. of reagents. The H was used fresh; because of activated aerosols, the purified and washed H, when stored for several days, became "aged or ripened" and possessed a rate of oxidation that was faster than that of the fresh H. The action of aqua regia and of H_2SO_4 on the fena-glass wall of the app. and the effect of the etched surface on the reaction velocity are given in detail. Special precautions were taken to eliminate the Pt and V present in glass from affecting the reaction.</p> <p>Frank Maresh</p>		2	
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Preparation and concentration of radioactive gold.
 Vladimir Majer. *Chem. Listy* 33, 130 2(1939).—(1) About 50 g. of $\text{Na}_2[\text{Au}(\text{SO}_3)_4]$ was bombarded by thermal neutrons from $\text{Rn} + \text{Be}$ in a large paraffin block for 48 hrs. The powd. residue was shaken for 4 hrs. with 5 g. of metallic Hg. The ratio of the active to the inactive isotope was 9 times greater in the Hg than in the Au residue. The greatest activity was found in the most finely dispersed Hg, which is in a position to amalgamate the largest no. of liberated atoms of radioactive Au. (2) One cc. of 0.05 *M* AuCl_3 treated with a few drops of oxalic acid and heated until it ceased to be optically clear was added to 20 cc. of 0.05 or 0.5 *M* AuCl_3 contg. enough NaOH to be a 5 *AK* soln. After the soln. became red, it was exposed to thermal neutrons from $\text{Rn} + \text{Be}$ at an av. intensity of 400 millicuries for 48 hrs. During the period of bombardment some of the Au coagulated from an ionic dispersion into a colloidal dispersion and finally into a suspension which pptd. and carried with it the atoms of radioactive Au liberated from the AuCl_3 , the latter substance contg. a large no. of Au atoms which can be activated. The Au of the colloidal ppt. contained a 10-fold concn. of the radioactive Au. Frank Maresh

ASB SEA METALLURGICAL LITERATURE CLASSIFICATION

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<p>BC</p> <p>FORMATION OF ATOMIC GROUPINGS OF RADIOACTIVE ELEMENTS. V. MAJER (Chem. Listy, 1939, 33, 8-11).—Examination of the activity of Th-C" with the aid of a Geiger-Müller counter reveals contamination with Th-B, -C, and -X; this is ascribed to recoil of groupings of atoms. R. T.</p>																																																																																																			
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<p>4</p> <p>The employment of radioactivity in chemistry and technology. Vladimir Majer. <i>Chem. Obozr.</i> 14, 118-22 (1939).—In a review M. discusses analytical methods, measuring devices, radioactive prepus. of practical importance, the emen. of radioactive elements, etc. Frank Marsh</p>																																																																																																																													
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<p>CA</p> <p>IN THIS DISCUSSION</p> <p>Can the semimicrochemical Winkler method have any significance for technical analyses? Vladimir Majer and Jaromir Macek. <i>Chem. Abstr.</i> 14, 53 5:1939). The experience necessary in applying the semimicro Winkler method for detg. Ca, Pb and sulfate make it doubtful whether the procedure is useful except where many analyses are required. Frank Marek.</p>																									
<p>ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>BOOKS AND SERIALS</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50</p>																									

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<p>BC</p> <p>Can radioactive isotopes of thallium with a long life-period be used as indicators? V. MAJER (Chem. Listy, 1938, 32, 436-438).—Thermic neutrons from a Ra-Be source were allowed to act on Tl_2O_3 with the object of obtaining ^{204}Tl (half life-period 37 min.) to be used in place of ^{204}Pb as an indicator of Tl. The product obtained exhibited feeble activity, and contained chiefly ^{204}Tl. Using a Geiger-Nuttall counter, the radioactivity of Tl_2O_3 can be detected during 30 min., which suffices for most analytical purposes.</p> <p style="text-align: right;">R. T.</p>																																																			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>3RD ORDER</p> <p>2ND ORDER</p> <p>1ST ORDER</p> <p>4TH ORDER</p>																																																			

Radioactive recoil in the preparation of thorium C.
Vladimír Majer. *Collection Czechoslov. Chem. Commun.* 10, 230-41 (1948).—By starting with a prep. of radiothorium, Th C' was collected on a 1.5-cm sq. Pt foil from the active deposit by the recoil method (Hahn and Meitner, C. A. 3, 2825) with a field of 125 v. and exposures of 21 hrs. and 10-15 min. for the active deposit and Th C', resp. While the Th C' showed sufficient purity when examd. electroscoically, a Geiger-Müller counter showed not only the expected Th C and Th B but also a Th X content amounting to 10% of the atoms. This admixt. causes 0.01% of the initial activity of the prepn. The impurity is explained by the recoil of atomic aggregates (Schwarz, C. A. 28, 5731) which pass, under the influence of the elec. field and without loss of Th X, from one Pt foil to the next during the purification. In one exp. an unexplained increase in activity between 30 and 50 hrs. was recorded. D. W. Pearce

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7-1

Polarographic studies with dropping mercury cathode. VI. Simultaneous polarisation of both electrodes. V. MAJEK. (Coll. Czech. Chem. Comm., 1937, 9, 457-464).—The influence of the electrolyte and of the presence of O_2 on the variations in anodic and cathodic potential accompanying changes in applied voltage are discussed. J. N. A.

ANAL. CHEM. METALLOGR. LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p><i>BC</i></p> <p>Polarographic studies with the dropping mercury cathode. LXX. Hydrogen overpotential in mixtures of light and heavy water and the separation coefficient. J. Heyrovsky. LXXI. Changes of polarisation when using small anodes. V. Malina (Coll. Czech. Chem. Comm., 1937, 9, 345-360, 360-376). LXX. Theoretical. The results of Novak (this vol., 414) are discussed and a formula expressing the H overpotential in acid D_2O-H_2O mixtures is deduced. The electrolytic separation coeff. for H and D at cathodes with high overpotential is discussed.</p> <p>LXXI. Apparatus for the automatic registration of current-voltage and "potential-voltage" curves (the course of the electrode potential during electrolysis with a stable Hg anode and a dropping Hg cathode) is described. In NO_3 and SO_4 solutions considerable changes in anode potential occur if the anode is small. In Cl^- solutions the addition of Hg_2Cl_2 stabilises the potential of large anodes, but does not prevent passivity of small anodes. In OH^- solutions red HgO does not remove changes of anodic polarisation. These phenomena are explained by supersaturation of the anodic layers and by the formation of finely dispersed HgO of increased solubility. E. S. H.</p> <p><i>a-1</i></p>																			
<p>ASH-SLA METALLURGICAL LITERATURE</p> <p>SECTION ONE</p> <p>SECTION TWO</p> <p>SECTION THREE</p> <p>SECTION FOUR</p> <p>SECTION FIVE</p> <p>SECTION SIX</p> <p>SECTION SEVEN</p> <p>SECTION EIGHT</p> <p>SECTION NINE</p> <p>SECTION TEN</p> <p>SECTION ELEVEN</p> <p>SECTION TWELVE</p> <p>SECTION THIRTEEN</p> <p>SECTION FOURTEEN</p> <p>SECTION FIFTEEN</p> <p>SECTION SIXTEEN</p> <p>SECTION SEVENTEEN</p> <p>SECTION EIGHTEEN</p> <p>SECTION NINETEEN</p> <p>SECTION TWENTY</p> <p>SECTION TWENTY-ONE</p> <p>SECTION TWENTY-TWO</p> <p>SECTION TWENTY-THREE</p> <p>SECTION TWENTY-FOUR</p> <p>SECTION TWENTY-FIVE</p> <p>SECTION TWENTY-SIX</p> <p>SECTION TWENTY-SEVEN</p> <p>SECTION TWENTY-EIGHT</p> <p>SECTION TWENTY-NINE</p> <p>SECTION THIRTY</p>																			

2

CA

The significance of ultrasonic waves in chemistry.
 Vladimir Majer. *Chem. Listy* 30, 248-51, 270-7, 305-10
 (1930). A series of lectures covers a classification of
 sound sources of ultrasonic waves, such properties as dis-
 persion, reflection, absorption, energy content, etc., de-
 vices for detecting the waves, and discussion of their ef-
 fects in colloid chemistry, on biol. substances, on special
 chem. reactions and upon the reaction kinetics of gases.
 P. M.

ASAC 51A METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS		1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX		3RD AND 4TH ORDERS																	
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<p>Determination of mercury in air and absorption of mercury vapour by means of metallic gold. V. Masan (Coll. Czech. Chem. Comm., 1936, 8, 339-348).—Air is passed at a known rate through glass tubing containing Au leaf. One end of the tubing is then sealed and the other drawn out into a fine capillary. On distilling, the Hg condenses in the capillary and is dissolved in $\text{Cl}_2\text{-H}_2\text{O}$ and either determined colorimetrically or repptd. on Fe wire, redistilled in a fine capillary, and determined micro-metrically. The determination of Hg by condensing in liquid air has also been investigated. C. R. H.</p>																							
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION																							
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<div style="display: flex; justify-content: space-between;"> COMMON ELEMENTS PROCESSES AND PREPARATION 13 </div> <div style="text-align: center; margin-top: 100px;"> <p>Poisoning effect of mercury vapors. Vladimir Majer. <i>Chem. Osvet</i> 10, 51-3 (in English 51) (1935). --The various values of dangerous Hg concns. in the air mentioned in the literature differ greatly, the mean of all being about 10-50 Hg per cu. m. Preventive measures are described such as intensive ventilation or decrease of dispersed Hg in the rooms. I. Kučera</p> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> COMMON ELEMENTS PROCESSES AND PREPARATION 13 </div>																									

CP

Polarographic studies with the dropping mercury cathode. XLVII. Passivation of small mercury anodes. Vladimir Majer. Collection Czechoslov. Chem. Commun. cations 7, 215-17(1935); cf. C. A. 29, 4077^a. - By use of a micropolarographic electrolysis app. to investigate aq. solns. of KCl and KBr new passivity phenomena were observed which are related to the formation of an anodic film of the invol. compd. A surface integral of the current-voltage curve was used to calc. the quantity of electricity which passed through the cell. From the quantity of electricity the thickness of the film was computed and found to be 146 ± 20 Å. Under certain conditions this film acts like a resistance with regard to the ohms. The explt. results are discussed with regard to the theories on mech. passivity. It is impossible to explain the observed results by the increase of the ohmic resistance due to the surface film.

W. George Parks

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COMMON ELEMENTS
COMMON VARIABLE INDEX
OTHER INDEX
AUTHOR AND LATTER INDEX

AIR-SLA METALLURGICAL LITERATURE CLASSIFICATION

Polarographic studies with the dropping mercury cathode. XLVI. Current-voltage curves obtained with small anodes. Vladimir Majer. *Collection (Zbieranka) chem. Communications* 7, 146-57 (1935). An app. is described, suitable for micropolarographic electrolysis, in which the anode area can readily be varied (from the normal 15 sq. cm. to 0.015 sq. cm.) with corresponding reduction in vol. of soln. to 0.01 cc. With small anode areas the shapes of the current-voltage curves remain the same, while the points of inflection are shifted in the direction of higher voltage, owing to increased resistance and concentration polarization. A voltage shift in the opposite direction is obtained when the cathode drops fall onto the anode, owing to the depolarizing effect of the neg. charge on the drops and the stirring action caused by the drops. With a very small vol. of soln. the intensity of the diffusion current decreases with time. H. A. Beatty

H. A. Heatty

The determination of traces of mercury. Vladimir Major. *Chem. Listy* 28, 160-73 (1934).—The diphenylcarbazone colorimetric method was found to be simple and rapid but gave accurate readings up to 0.2 γ only when the test was a clear soln. of HgCl_2 . Heavy metals, acids, free Cl and salts of the light metals had to be removed; this step is the source of many errors; removing Cl with air led to a mech. removal of some HgCl_2 . Evap. less than 0.5 cc. of soln. in desiccators to 0.1 cc. was satisfactory; evap. to dryness led to losses of HgCl_2 by hydrolyses and adsorption. A dry chlorination was long, and the presence of 0.0001 N NH_4Cl gave large neg. errors. Methods based upon a comparison of rings formed by distg. Hg or Hgl were not dependable for detns. By using micro methods, M. detd. 0.01 γ Hg by pptg. the Hg on an Fe wire from solns. contg. Cu salt. A vol. of less than 5 cc. was necessary, but by electrolyzing the soln. vols. of 20 cc. could be used. The wire plated with Hg was placed in a glass tube (with one end drawn into a 0.1 mm. capillary 8 cm. long) sealed at wide end, and distd. In a capillary of these dimensions the H_2O vapors formed a column 1-2 mm. long and served as a stopper before the Hg distillate entered the capillary. Under these conditions the Hg coalesced into a single drop, and after washing with EtOH on to a glass slide, the diam. was measured under a microscope at 190-300 magnification. If many drops formed, they were coalesced by heating the capillary in a microflame or washed with EtOH into a Jørgensen counting chamber. The drops entered the markings and were easily measured under the microscope. As many as 60 drops were measured with a smaller av. error than if the Hg had been in the form of a single drop.

Frank Marsh

Rapid determination of total alkalies in ceramic materials. V. Mager, *Zprawy Cerכולוד. keram.* 54:203 no. 11, 13-23 (1934). Cf. C. A. 27, 5270. — Moistened 20 mg. of the material in a Pt crucible with 0.3 cc. of H_2SO_4 and evaporated to dryness. Added 1 cc. of 10% NaOH solution and evaporated with 0.5 cc. of 40% HF. Added 1 cc. of 5% H_2NPO_3 and 1 cc. of 0.5-1 N NH_4OH to the residue. Al goes into soln. and Mg, Ca, Ti and Fe form insol. compds. Added 0.5 cc. of H_2O and proceed with the polarographic electrolysis. B. C. A.

B. C. A.

ASME-34-A METALLURGICAL LITERATURE CLASSIFICATION

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400027-6

MAJER, S.

S. MAJER, "Aldosteron - a new, highly active hormone." Chemical News (Poland),
No. 1, January 1955 pp. 1-4

L 1709-66

ACCESSION NR: AP5024159

ASSOCIATION: Katedra analytickej chemie Prirodovedeckej fakulty Univerzity Komenskeho, Bratislava (Department of Analytical Chemistry, Faculty of Natural Sciences, Comenius University); Katedra analytickej chemie Vysokej skoly chemicko-technologickej, Pardubice (Department of Analytical Chemistry College of Technical Chemistry) 2

SUBMITTED: 15Feb63

ENCL: 00

SUB CODE: OC, GC

NR REF SOV: 000

OTHER: 035

JPRS

Card 2/2 *DP*

L 1709-66 EWT(m)/EPF(c)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR:AP5024159

CZ/0043/64/000/012/0900/0912

AUTHOR: Majer, P. (Mayer, P.) (Docent, Candidate of sciences)(Bratislava);
Jurecek, M. (Yurechek, M.) (Professor, Doctor, Engineer)(Pardubice)

41
39
B

TITLE: Determination of active hydrogen in some nitro and nitroso compounds

SOURCE: Chemické zvesti, no. 12, 1964, 900-912

TOPIC TAGS: hydrogen, gas analysis, gas analyzer, chemical kinetics, organic nitro compound, organic nitroso compound

ABSTRACT: Analytical methods using liberated gas measurement in a gas meter were investigated; as hydrogen source LiAlH_4 dissolved in N-ethylmorpholine and dibutylether was used. Kinetic study of the course of reaction showed that with some of the materials investigated it was possible to distinguish the reaction of the active hydrogen from the reaction of the nitro and nitroso groups with the reagent, and that therefore it is possible to determine active hydrogen in the presence of these groups. Orig. art. has: 14 graphs, 2 tables.

Card 1/2

MAJER, P.; VOJVODOVA, D.

Determination of active hydrogen by the gravimetric method using lithium-aluminum tetrahydride in N-ethylmorpholine and n-butyl ether medium. Acta r nat Univ Com 8 pt.10 no.7 1964-1965 164.

1. Chair of Analytical Chemistry, Faculty of Natural Sciences,
J. A. Comenius University, Bratislava, Šmeralova 2.

MAJER, L

POLAND / Chemical Technology. Chemical Products and H
Their Applications. Glass.

Abs Jour: Ref Zhur-Khimiya, 1959, No 4, 12592.

Author : Majer, Leszek.

Inst : Not given.

Title : New Method in the Glass Industry of Czechoslovakia.

Orig Pub: Szklo i ceram., 1958, 9, No 8, 226-232.

Abstract: Observational data recorded by Polish specialists who visited 4 Czech glass plants producing glass packing predominantly are described. In particular, sketches or descriptions are cited of: automation (A) of slag removal from the gas generators, A of formulations and weighing of glass batches and of the method of lining the batch containers of the vat glass furnaces, of the apparatus for cooling the glass brick at the mirror level of the

Card 1/2

MAJER, L.:

On the possibilities of applying advanced methods in the glass industry.
By L. Majer ...

SO: Szklo i Ceramika, #10, 1955, p 232.

SAJDA, K.

Wire rope and its maintenance. . . 181.
STUDY, Praha, Vol. 3, no. 6, June 1955.

30: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955,
Uncl.

CZECHOSLOVAKIA

SPRINGER, V; KADLICEK, R; MAJER, J

Institute of Analytical Chemistry, Pharmaceutical
Faculty, Komenska University, Bratislava - (for all)

Prague, Collection of Czechoslovak Chemical Communi-
cations, No 2, February 1967, pp 774-786

"Contribution to investigation of the structure of
complexes of N,N-di(hydroxyethyl) glycine with Cu^{2+} ,
 Ni^{2+} and Co^{2+} "

MAJER, Josef

Quantitative analysis of simple systems by means of infrared spectroscopy. Chem prun 17 no.4:232-233 Ap '65.

1. Research Institute of Macromolecular Chemistry, Brno.
Submitted January 16, 1964.

MAJER, Josef

Determination of the esterified portion of polyoxy methylene
by means of the infrared spectroscopy. Chem prum 15 no.3:
172-173 Mr '65.

1. Research Institute of Macromolecular Chemistry, Brno.

MATER, Josef

Viscosity measurement of the solutions of standard polyformaldehyde samples. Chem prum 15 no.2:109-111 F '65.

1. Research Institute of Macromolecular Chemistry, Brno.

STEJNY, Jaromir; MAJER, Josef

Properties of polyformaldehyde and its use. Chem prum 12 no.1:53-56
Ja '62.

1. Vyzkumny ustav makromolekularni chemie, Brno.

S/081/62/000/009/073/075
B171/B144

AUTHOR: Majer, J.

TITLE: Determination of the degree of crystallinity in polypropylene
by means of infrared spectroscopy

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 9, 1962, 698, abstract
9R27 (Collect. Czechosl. Chem. Commun., 26, no. 7, 1961,
1756-1762)

TEXT: It has been established that the most sensitive "crystalline" bands
(BD) are the BD at 842, 998 and 809 cm^{-1} and the most sensitive
"amorphous" BD is the absorption at 1158 cm^{-1} . These BD make it possible
to determine the degree of crystallinity in polypropylene samples. The
"fixed" BD at 973 and 1257 cm^{-1} may be used as internal reference standards.
The experimental error of crystallinity as determined by this method is
 $\pm 7\%$. [Abstracter's note: Complete translation.]

Card 1/1

Thermal properties of poly- ...

Z/009/61/000/009/002/003
E112/E435

but also change the structure of the basic crystalline lattice, thus affecting thermal cohesion. There are 9 figures and 24 references: 2 Soviet-bloc and 22 non-Soviet-bloc. The four most recent references to English language publications read as follows: Ref.9: Willbourn A.H. J.Polymer Sci. 34, 569 (1959); Ref.13: Goppel J.M. Brit. Plastics 32, 207 (1959); Ref.15: Natta G. J. Polymer Sci. 34, 531 (1959); Ref.19: Harban A.A. et al. J. Polymer Sci. 41, 157 (1959). ✓

ASSOCIATION: Výzkumný ústav makromolekulární chemie, Brno
(Research Institute of Macromolecular Chemistry, Brno)

SUBMITTED: July 24, 1960

Card 5/5

Thermal properties of poly- ...

Z/009/61/000/009/002/003
E 112/E435

according to Vicat's test. Comparisons with high-pressure polyethylene have shown that the corresponding copolymers should have the following composition: 9 to 12% by weight of propylene and 91 - 88% ethylene; this being also in agreement with the previously established mechanical properties.

g) Temperature of softening vs. density. Correlations are similar to Vicat temperature. A similar relationship to the graphs for Vicat temperatures is also shown when temperatures of softening are plotted against inverse functions of logs of viscosity or propylene content of ethylene-propylene copolymers. (Vicat's test and softening temperature test differ only as to applied load.) General conclusions from the different tests are that the graphs correlating density and thermal properties show a great scatter of points which cannot be accounted for by variations in methods of preparation of the samples or by experimental errors. According to the author, it is doubtful whether the relationship between density and melt characteristics can be expressed by a common function for the different types of polyethylene since these differ as regards the number and character of short cross-chains, which not only lower crystallinity

Card 4/5

Z/009/61/000/009/002/003
E 112/E435

Thermal properties of poly- ...

It seems that the negative gradient of this linear function is the greater the higher the degree of cross-linking.

c) Melting point vs. propylene content in ethylene-propylene copolymer. The melting points show first a decrease with increased proportions of propylene, until a minimum is reached at approximately 120°C. The curve then rises with increasing propylene content until a maximum is reached at 160 to 165°C (melting point of pure polypropylene).

d) Vicat temperature vs. density. This function showed considerable scatter of points. The values found by the author were a few degrees higher than literature data.

e) Vicat temperature vs. inverse function of logs of viscosity. The thermal stability increases as the molecular weight, and consequently the viscosity of the amorphous phase, increases.

f) Vicat temperature vs. propylene content in ethylene-propylene copolymers. The introduction of polypropylene into the poly-ethylene chain causes not only a reduction of crystallinity but also a decrease of molecular weight. Even small additions of propylene will cause a distinct reduction of thermal stability

Card 3/5

Z/009/61/000/009/002/003

E112/E435

Thermal properties of poly-

temperature is increasing $0.83^{\circ}\text{C}/\text{min}$.

3. Temperature of softening, determined on a Hoeppler consistometer, under a load of $2 \text{ kg}/\text{cm}^2$, while temperature is increased at a rate of $0.6^{\circ}\text{C}/\text{min}$.

Results are presented in the form of graphs:

a) Melting points vs. density. This function is characterized by a considerable scatter of points. The graph indicates, nevertheless, that the melting point of low-pressure polyethylene decreases with decreasing density. A similar functionality is shown by ethylene-propylene copolymers with low propylene content. Increased propylene proportions give rise to anomalies. The higher thermal stability of the propylene chain will be apparent in copolymers where the propylene concentration exceeds equimolar ratios. The melting point rises and approaches the values of pure polypropylene.

b) Melting points vs. inverse function of the logarithm of viscosity (η). The author has established that this function can be defined by the expression:

$$\text{melting point} = -7/\{\eta\} + 136 (\pm 6).$$

Card 2/5

Z/009/61/000/009/002/003
E 112/E435

AUTHOR: Majer, Josef

TITLE: Thermal properties of polyethylene and ethylene-propylene copolymers

PERIODICAL: Chemický průmysl, No. 9, 1961, pp. 489-493

TEXT: In a previous paper (Ref. 21: Chemický průmysl, Vol. 11, 1961, pp. 97-101) the author has correlated mechanical properties and structure (chain-branching) of polyethylenes and ethylene-propylene copolymers. The present study correlates structure and melt characteristics of the following:

1. Commercial, high-pressure polyethylene.
2. Experimental samples of Ziegler's polyethylene.
3. Ethylene-propylene copolymer.

The products are defined by the logarithms of viscosity (η), density ρ^{25} and ash content and the following melt characteristics were established:

1. Optical melting point, i.e. temperature at which crystallinity disappeared between crossed Nicols on a hot stage microscope.
2. Vicat temperature, i.e. temperature required to give 1 mm penetration with a 1 mm² needle under a 1 kg load, while

Card 1/5

89411

Mechanical Properties of ... Z/009/61/000/002/005/008
E112/E453

shown that a copolymer with 10 to 15% and 80% propylene content respectively corresponds in its stiffness characteristics to high-pressure polyethylene. Similarly to stiffness, upper yield stress of high-pressure polyethylene and polypropylene is also correlated to crystallinity. The author has established an identical relationship for the ethylene-propylene copolymers. The value for upper yield stress decreases with increased propylene content, reaching a minimum with equimolar participation of both components (ethylene and propylene respectively). Tensile strength was also found to increase with density. The tensile strength of high-pressure polyethylene (100 to 140 kg/cm²) is displayed by a copolymer containing 11 to 23% and 76 to 94% propylene respectively. No clear cut correlation was, however, established for the copolymers and the basic parameters with respect to extensibility. The latter decreased slightly as the proportion of propylene in the copolymer increased. There are 11 figures and 28 references: 2 Czech and 26 non-Czech.

ASSOCIATION: Výzkumný ústav makromolekulární chemie, Brno
(Research Institute for Macromolecular Chemistry, Brno)
SUBMITTED: February 27, 1960
Card 4/4

89411

Z/609/61/000/602/605/602
E112/F453

Mechanical Properties of ...

Olsen). 4. Tensile strength properties (upper yield stress and ultimate elongation, ASTM-D 412-51T). Although interpretation of the effect of molecular structure on some of the properties of polyethylene requires a three parameter system (average number molecular weight, short and long-chain branching). Other mechanical properties of the solid polymer are substantially unaffected by long chain branching. Quantitative correlation can therefore be simplified by using a plane projection, as adopted by the author for the interpretation of the mechanical properties of ethylene-propylene copolymers. The mechanical properties were considered as functions of two variables; namely average number molecular weight and crystallinity. The correlation between density, crystallinity and stiffness were demonstrated for high-pressure polyethylene by Sperati, and the author has applied it in the present paper also for low-pressure polyethylene and the ethylene-propylene copolymers. It is demonstrated that stiffness shows a linear increase with increase in crystallinity, the latter being a function of chain branching. Change of density for copolymers with increasing proportions of propylene is illustrated graphically and compared to high-pressure polyethylene. It is

Card 3/4

89411

Z/009/61/000/002/005/008
E112/E453

Mechanical Properties of ...

properties. The present paper sets out to provide additional information in that field. A study of densities, rigidity, stress-strain properties in tension, upper yield stress, tensile strength and ultimate elongation of a wide range of ethylene-propylene copolymers is submitted. Comparative values for polyethylene and polypropylene are also included. The effect of increased proportions of propylene on the mechanical properties of the polymer was followed with the view to prepare a material with similar characteristics to that of high-pressure polyethylene. The copolymers were polymerised under conditions described in a previous Czechoslovak paper (Vilím, Chemický průmysl 9/34 101, 1959, Ref.3), using $\text{TiCl}_4 + \text{Al}(\text{C}_2\text{H}_5)_3$ as catalyst and n-heptane, cyclohexane or Kogazine 1 (hydrogenated) as reaction medium. The polymers studied covered a wide range of densities, allowing to reinvestigate the correlations between the two basic parameters (density, average number molecular weight) and mechanical properties, as expressed by Sperati et al (J. Am. Chem. Soc. 75, 6127, 1953, Ref.7). The following constants were determined. 1. Intrinsic viscosity (in tetraline). 2. Density (pycnometer, hexyl alcohol, or by flotation). 3. Stiffness (Tinius-Card 2/4

89411

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Z/009/61/000/002/005/008
E112/E453

AUTHOR: Majer, Josef

TITLE: Mechanical Properties of Ethylene-Propylene Copolymers

PERIODICAL: Chemický průmysl, 1961, No.2, pp.97-101

TEXT: Low-pressure polyethylene is too rigid and crystalline for many applications (wrapping materials). High-pressure polyethylene is less crystalline because of higher degree of total chain branching. Several authors have proposed to produce the same branching effect by copolymerisation of ethylene and propylene. Two copolymerisation methods are suggested: alternating and random polymerisation. Difficulties with random polymerisation are discussed. The use of Ziegler's catalyst produces a mixture of homo and copolymers. Natta (J. Polymer Sci 34, 21, 1959, Ref.1) suggests the use of a homogeneous catalyst system. Copolymerisation is nonazeotropic and the copolymers contain more ethylene units than present in the original charge mixture. Difficulties can be overcome by using flow polymerisation with a high flow-rate. Copolymers of ethylene and propylene were studied primarily from the structural point of view and there are only few references in the literature about their mechanical

Card 1/4

S/001/62/000/010/005/005
B166/B144

AUTHORS: Majer, J., Osecký, P.

TITLE: Determining the degree of branching of polyethylene by the
Cubler - Kovacs method

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 702, abstract
1CR16 (Collect. Czechosl. Chem. Commun., v. 25, no. 11,
1960, 2751-2756)

TEXT: It is shown that the Cubler - Kovacs dilatometric method of
determining the degree of branching of Ziegler-type polyethylene can be
applied in practice. The simplifications suggested make it possible to
cut out the inaccuracies which attend mainly the graphic processing of
the experimental data. The data from this method agree well with the
results of investigations by infrared spectroscopy. The maximum relative
error of the method is $\leq \pm 5\%$. It can be applied to polyethylene with a
degree of branching of up to 0.015. [Abstracter's note: Complete transla-
tion.]

Card 1/1

MAJER, J.

Distr: 482c(j)

Secondary crystallization of the Ziegler-type polyethylene.
 J. Majer (Výzkumný ústav makromol. chem., Brno, Czech.). *Collection Czechoslov. Chem. Commun.* 25, 2484-8(1960)(in German).--The secondary crystn. of low-pressure polyethylene according to Ziegler was measured dilatometrically in the temp. range from 60 up to 124°. The isotherms are expressed by the relation $(v_r/v_0)r = A - B \log r$, where v_r is sp. vol. at time r and v_0 is sp. vol. of the amorphous phase, and from the temp. dependence the activation energy of the segment diffusion was calcd. (10.6 kcal./mol. of the kinetic unit) and compared with other types of polyethylene. E. E. E.

3
JAJ(WB)
1

MAJER, J.

Distr: 4E2c(j)

~~Kinetics of the crystallization process of low-pressure polyethylene; J. Majer, J. Belusa, and J. Lanikova (Macromolecular Research Institute, Brno, Czechoslovakia). *Kunststoff-Rundschau* 7, 39-44(1960).—On analyzing the crystn. isothermal curve of low-pressure polyethylene according to the procedure of Avrami (CA 35, 3137¹) and Morgan (CA 48, 13270b), the authors found that the crystn. is dependent on 2 competitive processes: formation of the nuclei and growth of the spherulites. The melting conditions were 8 min. at 180° and the crystn. temperature range 120–7.0°. The value of the velocity constant k_0 changes in the range order of 1×10^{-3} to 1×10^{-10} . At temps. below 120° the primary crystn. cannot be followed any more by the dilatometric method. The comparison of several theoretical relations has shown the equivalence of vol. and wt. portions of the cryst. phase; the Mandelkern equation, however, gives lower values for k_0 . According to the Kato-Rowitz criterion, in low-pressure polyethylene an apparent induction period is probably involved and must not be excluded in computing the k_0 and n values. The activation energy computed from the temp. dependence of time parameter is of the same order, however higher than in high-pressure polyethylene. Only the right-side portion of the curve from the max. of total crystn. velocity was studied.~~

L. A. Helwich

5
1-9-9 (N/A)

CZECHOSLOVAKIA/Atomic and Molecular Physics - Physics of Polymers. D-

Abs Jour : Ref Zhur Fizika, No 3, 1960, 59⁴⁰

polyethylenes prepared by different ways, are apparently
due to the influence of branching.

Card 2/2

- 51 -

CZECHOSLOVAKIA/Atomic and Molecular Physics - Physics of Polymers. D-

Abs Jour : Ref Zhur Fizika, No 3, 1960, 5940

Author : Majer Josef

Inst : Research Institute for Macromolecular Chemistry, Brno,
Czechoslovakia

Title : Effect of Temperature on Viscosity of Molten Polyethylene

Orig Pub : Chem. prumysl, 1959, 9, No 4, 219-220

Abstract : Using an extrusion plastomer, the author measured the activation energy E_a of the flow of polyethylene (I) at a constant value of the shear stress $\tau = 8.14 \times 10^5$ dyne/cm². The value of E_a amount to 6.8 kcal/mole for I of low pressure (Ziegler type and 11.4 kcal/mole for I of high pressure, and these values do not change in the investigated range of the yield factor in specimens with identical prior history. Different values of E_a of

• Card 1/2

MATER J.

✓ Relation between the viscosity of the solution and of the melt of polyethylene. Josef Majer (VÚMCH, Brno, Czech.), *Chem. průmysl* 9, 494-7 (1959). — The flow index (FI) and the logarithmic viscosity no. ($[\eta]$) of high-pressure polyethylene (I) and low-pressure polyethylene (II) were estd., FI being measured at 190° and $[\eta]$ being estd. in xylene and Tetralin at 110-55°. The linear relation, $\log FI = f(\log [\eta])$, has a slope of -5.0 for II, whereas for I this relation is not valid; with increasing mol. wt. the melt viscosity of I increases more rapidly than that of II, and therefore the processing of high mol. wt. II is better than of I with the same mol. wt. 53 references. J. Šebenda

CFK
VI

3
2 JQ (NB)
4E2C (g)

MAJER, J.

"Influence of temperature on the viscosity of molten polyethylene."

CHEMICKY PRUMYSL, Praha, Czechoslovakia, Vol. 9, No. 4, April 1959.

Monthly List of East European Accessions (HEAI), LC, Vol. 8, No. 9, September 1959.

Unclassified.

MAJER Josef

Distr: 4E20(j)7

Bulk polymerization of benzyl methacrylate. Josef
Majer (Vysk. ust. makromol. chemie, Brno, Czech.).

Chem. průmysl 8(33), 324-7(1958)(English summary).—
The effects of initiator (benzoyl peroxide) concn. (I), abs.
temp. (II), and impurities upon the polymerization were
studied. The rate is proportional to the square root of I,
and the logarithm of the rate is a linear function of the re-
ciprocal II. Pb and O functioned as inhibitors. The de-
pendence of viscosity of the polymer upon the temp. was
shown graphically. Acetyl benzoyl peroxide required
lower polymerization temp. and was recommended as a
more suitable catalyst. Alexei B. Bokorov.

4
3 May

ORIGINAL
CATEGORY :

DATE, JOUR. : REXONIA, No. 1 1960, No. 1955

AUTHOR :
REF. :
TITLE :

ORIG. PUB. :

ABSTRACT
con '0

method for polymers with high viscosity of the
solution. The great sensitivity of commercial
polymers (for example polystyrene, copolymer
of polystyrene and acrylonitrile obtained according
to the Ziegler method) to the change of the
structure of the solution, as compared with semi-
crystalline polymers, was confirmed. The coefficient
of conversion of the index of viscosity into
viscosity, expressed in poise, was 0.0176.
-- L. Sedov

*poly-

CARD:

2/2

COUNTRY : USSR, Kazakh
 CATEGORY : Chemical technology. Chemical products and
 their uses. Part 4. Synthetic Polymers. 11-0101
 RES. JOUR. : Khim., No. 1 1960, No. 1965
 AUTHOR : V. I. G. J.
 TITLE : Rheology of suspensions of polymer particles
 ORIG. PUB. : Chem. progress, 1964, 8, No 12, 637-660
 ABSTRACT : The rheological properties of the suspensions of
 hot and high pressure polyethylene were studied
 in the case of an extrusion plant. It
 was established that in the investigated re-
 gion of working pressure (2-10 kg/cm²) the
 dependence of the logarithm of viscosity upon
 the logarithm of pressure has a linear charac-
 ter. This rule was utilized for calculating
 the index of fluidity by the extrapolation
 method.

REF: 1/2

CZECHOSLOVAKIA / High Molecular Chemistry.

I

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 18035

Author : Majer, J.

Inst : Not given

Title : Polymerization of Benzylmetacrylate in a Block

Orig Pub : Chem. promysl, 1958, 8, No 6, 324-327

Abstract : The rate of polymerization of benzylmetacrylate is proportional to the square root of concentration of benzoyl peroxide. The energy of activation is equivalent to 18.8 kcal/mol. Salts of Pb and O₂ inhibit polymerization.
-- Kh. Bogdasar'yan

Card 1/1

MAJER, JOSEF

Distr: 4E2c(j)/4E3d

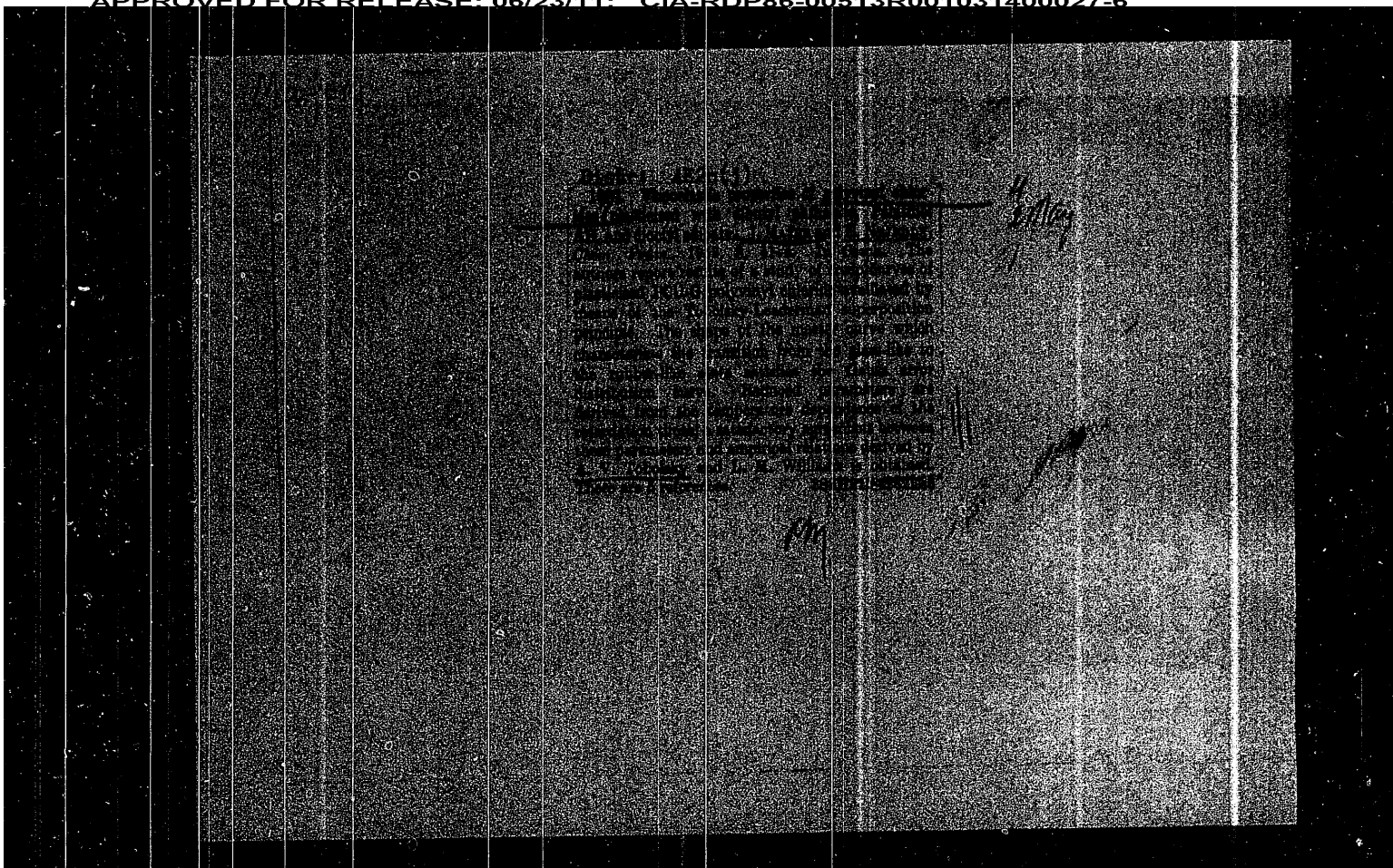
1
7
✓ Block polymerization of diallyl phthalate, Josef Majer
(Vysk. Ústav makromol. chem., Brno, Czech.). Chem.
průmysl 5, 205-7 (1958).—The block polymerization of
diallyl phthalate was investigated dilatometrically and
refractometrically. The square of the over-all rate of
polymerization is proportional to the concn. of the initiator.
The energy of activation is 27.7 ± 0.9 kcal./mole, and
corresponds to the values obtained during the block poly-
merization of monofunctional monomers. The gel point,
which is expressed as percentage of monomer conversion to
polymer, is a linear function of the reaction rate, and is
affected by the concn. of the initiator. On increasing concn.
of the initiator there is a shift in the gel point to correspond-
ingly higher conversions. From C. 1958, 12707.
Edgar Hammond

5
1-BW(MR)
1-JAS(JK)
2

be

3E

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400027-6



MAJER, J.

CZECHOSLOVAKIA/Optics - Physical Optics

K-5

Abs Jour : Ref Zhur - Fizika, No 3, 1958, No 6937

Author : Kvorak J., Majer J.

Inst : Not Given

Title : Time Dependent Birefringence of Macromolecular Substances

Orig Pub : Sb. chekhosl. khim. rabot, 1957, 22, No 2, 379-389

Abstract : See Referat Zhur Fizika, 1957, 21103

Card : 1/1

CZECHOSLOVAKIA/Chemistry of High-Molecular Substances.

I.

Abs Jour: Ref Zhur-Khin., No 13, 1958, 45489.

which can be utilized for a rapid determination of
I in 6-caprolactam.

Card : 2/2

CZECHOSLOVAKIA/Chemistry of High-Molecular Substances.

I

Abs Jour: Ref Zhur-Khin., No 13, 1958, 45489.

Author : Majer Josef, Percutka Oldrich.

Inst :

Title : Titration of N-Methoxymethylpolycaprolactam by the
Precipitation Method.

Orig Pub: Chem. prumysl, 1957, 7, No 11, 617-619.

Abstract: The volumes of acetone or water, which cause incipient turbidity of aqueous alcoholic solutions of N-methoxymethylpolycaprolactam are linearly correlated with the degree of N-methoxymethyl substitution (I) of the polymer and depend only slightly upon its concentration in the solution,

Card : 1/2

CZECHOSLOVAKIA/Atomic and Molecular Physics - Physics of Polymers D-9

Abs Jour : Ref Zhur - Fizika, No 5, 1958, No 10517

of superposition makes it possible to study the behavior of amorphous polymers in experimental time intervals that are difficult to attain. This principle cannot be applied to crystalline polymers, since their internal structure depends on the temperature. The equations of state need a critical review, since they were obtained empirically and their correctness has been confirmed so far only for several polymers and copolymers.

Card : 2/2

Majer Josef

CZECHOSLOVAKIA/Atomic and Molecular Physics - Physics of Polymers D-9

Abs Jour : Ref Zhur - Fizika, No 5, 1958, No 10517

Author : Majer Josef

Inst : Higher Institute for Macromolecular Chemistry, Brno, Czechoslovakia

Title : Viscoelastic Properties of Polybenzylmetacrylate and Polymethylmetacrylate in the Transition Region

Orig Pub : Chem. prumysl., 1957, 7, No 8, 433-437

Abstract : The author has investigated the viscoelastic properties of polybenzylmetacrylate and polymethylmetacrylate, containing 5% dibutylphthalate, in the transition region (using creep curves measured by means of a consistometer. The limiting moduli were calculated with the aid of the principle of temperature-time superposition of Tobol'skiy. The characteristic delay times and the differentiation temperatures, which are in good agreement with the vitrification temperatures, were calculated for both polymers. The given equation of state is fulfilled in the region $0.95 < T_r < 1.05$ (T_r is the reduced differentiation temperature). The use of principle

Card : 1/2

MAJER, JOSEF

CZECHOSLOVAKIA/Chemistry of High Molecular Substances.

I

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 23685

Author : Josef Majer

Inst : -

Title : Viscoelastic Properties of Polybenzylmetacrylate and Polymethylmetacrylate in Transition Region.

Orig Pub : Chem. prumysl, 1957, 7, No 7, 433-437

Abstract : The creeping curves of polybenzylmetacrylate and polymethylmetacrylate in the transition region were plotted. The border moduli were computed by the method of temperature-time superposition developed by Tobol'skiy. The characteristic lag time and the discrimination temperature agreeing with the vitrification temperature were determined. The presented equation of state is satisfied in the range of presented discrimination temperatures $1.5 > T_d > 0.95$.

Card 1/1

MAJER, Jiri

Purity of Vah River water. El tech obzor 50 no.10:604 0 '61.

1. Ceskomoravska-Kolben-Danek Blansko, n.p.

(Water)

L 00665-67 EWP(j) RM

ACC NR: AP6027369

SOURCE CODE: CZ/0043/66/000/004/0242/0251

AUTHOR: Majer, Jaroslav--Mayer, Ya. (Docent; Pharmacist; Candidate of sciences; Bratislava); Kotoucek, Milan--Kotoucek, M. (Graduate pharmacist; Bratislava); Dvorakova, Edita--Dvorzhakova, E. (Graduate pharmacist; Bratislava)

8
B

ORG: Department of Analytical Chemistry, Pharmaceutical Faculty, Comenius University Bratislava (Katedra analytickej chémie Farmaceutickej fakulty Univerzity Komenského)

TITLE: New complexans (V). Complexes¹ of ethylenediamino-N,N'-dipropionic-alpha, alpha' acid, and of ethylenediamino-N,N'-dipropionic-alpha, alpha'-N,N'-diacetic acid with the cations of alkali earths, and with some other divalent cations

SOURCE: Chemické zvesti, no. 4, 1966, 242-251

TOPIC TAGS: cation, alkali earth mineral, amino acid, acetic acid, dissociation constant, stability constant, intermolecular complex

ABSTRACT: Schwarzenbach's method was used for potentiometric investigation of the dissociation constant of the two acids mentioned above, and of the complexes of these acids with divalent cations of Mg, Ca, Sr, Ba, Cu, Cd, Zn, Pb, Mn, and Fe. The dissociation and stability constants found are compared to those of ethylene-diamino-N,N'-diacetic acid, and of ethylene-diamino-N,N,N',N'-tetra-acetic acid. Orig. art. has: 2 figures, 10 formulas, and 6 tables. [JPRS: 36,464]

SUB CODE: 07 / SUHM DATE: 20May65 / ORIG REF: 003 / OTH REF: 004
Card 1/1 ^{vir}

0217

0496

L 36040-66 EWP(j) RM

ACC NR: AP6027370

SOURCE CODE: CZ/0043/66/000/004/0252/0260

AUTHOR: Novak, Vladimir (Engineer; Bratislava); Svicekova, Maria--Svicekova, M. (Graduate pharmacist; Bratislava); Majer, Jaroslav--Mayer, Ya. (Docent; Pharmacist; Candidate of sciences; Bratislava)

ORG: Department of Analytical Chemistry, Pharmaceutical Faculty, Comenius University, Bratislava (Katedra analytickej chemie Farmaceutickej fakulty Univerzity Komenskoho)

TITLE: New complexans (VI). Stability constants of racemic-2,3-diamino-butano-N,N,N',N'-tetraacetic acid with lanthanides determined by the polarographic method of exchange equilibrium systems

SOURCE: Chemické zvesti, no. 4, 1966, 252-260

TOPIC TAGS: stability constant, acetic acid, lanthanum, polarographic analysis, chemical equilibrium

ABSTRACT: The polarographic investigation of the exchange equilibrium systems was used for the determination of the values of the logarithms of the stability constants of normal complexes of the racemic-2,3-diaminobutane-N,N,N',N'-tetraacetic acid with La. The stability constants are expressed as a discontinuous function of the atomic number of La forming the central ion of the complex. Orig. art. has: 5 figures and 3 tables. [JPRS: 36,464]

SUB CODE: 07 / SUM DATE: 10Apr65 / ORIG REF: 006 / OTH REF: 001

Card 1/1 MLP

L 36039-66 EWP(j) RM
ACC NR: AP6027368

SOURCE CODE: CZ/0043/66/000/004/0233/0001

AUTHOR: Dvorakova, Edita--Dvorzhakova, E. (Graduate pharmacist; Bratislava);
Majer, Jaroslav--Mayer, Ya. (Docent; Pharmacist; Candidate of sciences; Bratislava)

ORG: Department of Analytical Chemistry, Pharmaceutical Faculty, Comenius University,
Bratislava (Katedra analyticky chémie Farmaceutickej fakulty Univerzity Komenského)

TITLE: New complexans. (IV). Potentiometric investigation of complexes of meso- and
racemic acids: 2,3-diaminobutane-N,N,N',N'-tetraacetic acid with some divalent cations

SOURCE: Chemicke zvesti, no. 4, 1966, 233-241

TOPIC TAGS: cation, acetic acid, chemical stability, chelate compound, amino, ion
neutralization, ion concentration, polarographic analysis

ABSTRACT: Potentiometric determination of pH was used to find the
stability constants of chelates of stereoisomeric complexans of
meso- and racemic 2,3-diaminobutane-N,N,N',N'-tetraacetic acids
with cations Cu⁺⁺, Cd⁺⁺, Zn⁺⁺, Mn⁺⁺, and Fe⁺⁺. Schwarzenbach's
method of exchange equilibria with 2,2',2''-trisaminotriethylamine
was used. The stability constants of complexes with Fe⁺⁺ and Mn⁺⁺
ions were determined from the pH values of the neutralization curve
of the acid with the equimolecular concentration of the metal ion.
The values of the constants were compared to those obtained polaro-
graphically. Orig. art. has: 2 figures, 11 formulas, and 4 tables. [JPRS: 36,464]

SUB CODE: 07 / SUBM DATE: 20May65 / ORIG REF: 004 / OTH REF: 006

Card 1/1 *1112P*

L 10826-66

ACC NR: AP600442

SOURCE CODE: CZ/0043/65/000/004/0281/0286

AUTHOR: Jokl, Vladimir--Yokl, V. (Doctor; Doctor of natural sciences; Pharmacist; 17
Candidate of sciences); Majer, Jaroslav--Mayer, Ya. (Doctor; Candidate of sciences; 8
Pharmacist')

ORG: Department of Analytical Chemistry, Pharmaceutical Faculty, Comenius University,
Bratislava (Katedra analytickej chemie Farmaceutickej fakulty Univerzity Komenskeho)

TITLE: Study of complex compounds in solution by means of paper electrophoresis
(V.). Complexes of stereoisomeric 2,3-diaminobutane-N,N',N'-tetraacetic acids

SOURCE: Chemicke zvesti, no. 4, 1965, 281-286

TOPIC TAGS: intermolecular complex, electrophoresis, paper chromatography, organic
nitrogen compound, butane, acetic acid, stereochemistry

ABSTRACT: The evaluation of electrophoretic mobility of complexes of meso- and
rac- acids with some di- and trivalent central ions allowed to determine the
formation and stability of these complexes. The complexes are similar to those
of ethylenediaminetetraacetic acid; the m- forms have the same stability, the r-
have a very high stability similar to that of the complexes of 1,2-diaminocyclo-
hexanetetraacetic acid. The difference in stability is due to the effect of the
steric arrangement. The authors thank Viera Gregorova for part of the work
(r-DETA), which was done within the framework of work toward a degree. Orig. art.
has: 2 figures and 1 table. [JPRS]

SUB CODE: 07 / SUBM DATE: 16Jul64 / ORIG REF: 009 / OTH REF: 006
SOV REF: 001

Card 1/1

L 10827-66

ACC NR: AP6004439

SOURCE CODE: CZ/0043/65/000/004/0249/0258

AUTHOR: Jokl, Vladimir--Yokl, V. (Doctor; Doctor of natural sciences; Pharmacist; 17
Candidate of sciences); Majer, Jaroslav--Mayer, Ya. (Doctor; Pharmacist; Candidate of sciences) B

ORG: Department of Analytical Chemistry, Pharmaceutical Faculty, Comenius University, Bratislava (Katedra analytickej chemie Farmaceutickej fakulty Univerzity Komenskeho)

TITLE: Study of complex compounds in solution by means of paper electrophoresis.

IV. Complexes of 1,3-diaminopropanol (2)-N,N,N',N'-tetraacetic acid

SOURCE: Chemické zvesti, no. 4, 1965, 249-258

TOPIC TAGS: intermolecular complex, coordination chemistry, organic nitrogen compound, acetic acid, hydroxyl group, electrophoresis, paper chromatography

ABSTRACT: 1,3-Diaminopropanol(2)-tetraacetic acid (DPTA) is found generally as a six-donor chelate-forming agent, and its complexes are formed similarly to those of ethylenediaminetetraacetic acid (EDTA) by first forming mononuclear chelates having a 1:1 metal to agent ratio: the alcohol group of DPTA does not take part in the chelate formation. The Pb chelate Pb_2A^- is stable at pH > 4; during its formation a proton of the hydroxyl group is released and DPTA behaves as a 7-donor agent. FeA^- also probably releases a hydroxyl group above pH 4. Chelates of DPTA are less stable than those of EDTA: Mg chelate is very unstable. The authors thank Prof.-Engr. S. Stankoviansky for the encouraging discussions concerning this work. Orig. art. has: 2 figures, 5 formulas, and 2 tables. JPRS

SUB CODE: 07 / SUBM DATE: 25 May 64 / ORIG REF: 007 / OTH REF: 011
Card 1/1

L 33688-66 ENP(j) RM

ACC NR: AP6024204

SOURCE CODE: CZ/0043/65/000/011/0817/0825

AUTHOR: Novak, Vladimir (Engineer; Bratislava); Majer, Jaroslav--Majer, Ya. (Docent; Pharmacist; Candidate of sciences; Bratislava); Svichkova, Maria--Svichkova, M. 24
(Graduate pharmacist; Bratislava) B

ORG: Department of Analytical Chemistry, Pharmaceutical Faculty, Comenius University, Bratislava (Katedra analytickej chemie Farmaceutickej fakulty University Komenskoho)

TITLE: New complexans (III) Polarographic determination of stability constants of the complexes of meso-2,3-diaminobutane-N,N,N',N'-tetraacetic acid with lanthanum compounds. [This paper was presented at the Symposium on the Structure and Quality of Coordination Compounds, held in Bratislava from 2 to 4 September 1964.]

SOURCE: Chemické zvesti, no. 11, 1965, 817-825

TOPIC TAGS: stability constant, polarography, complex compound, exchange reaction, lanthanum compound

ABSTRACT: The stability constants were determined by polarographic measurements at 20°C in a medium of potassium nitrate. The La was trivalent and the cations used for exchange equilibrium determinations were Cd, Pb, Cu and Eu. La was in the form of 0.01M solution of $\text{La}(\text{NO}_3)_3$. Impurities contained usually in La strongly the results. Orig. art. has: 5 figures and 3 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 01Mar65 / ORIG REF: 007 / OTH REF: 001
Card 1/1 80

0925

1855

L 1637-66

ACCESSION NR: AP5024272

ASSOCIATION: Katedra analytickej chemie Farmaceutickej fakulty Univerzity Komenského,
Bratislava (Department of Analytical Chemistry, Pharmaceutical Faculty, Comenius
University)

SUBMITTED: 05Mar64

ENCL: 00

SUB CODE: 00, 00

NR REF SOV: 000

OTHER: 021

JPRS

Card 2/2

L 1637-66

ACCESSION NR: AP5024272

CZ/0043/64/000/008/0584/0596 16

AUTHOR: Jokl, V. (Yokl, V.)(Doctor of natural sciences, Pharmacist, Candidate of sciences)(Bratislava); Majer, J. (Mayer, Ya.)(Docent, Doctor of natural sciences, Candidate of sciences)(Bratislava); Mazacova, M. (Masachova, M.)(Graduate pharmacist,)(Bratislava)

TITLE: Study of complex compounds in solutions by means of electrophoresis on paper (III). Chelation by alcoholic hydroxyl

SOURCE: Chemické zvesti, no. 8, 1964, 584-596

TOPIC TAGS: chelaton, glycine, chelate compound, electrophoresis, solution property

ABSTRACT: The curves of the electrophoretic mobility of glycine complexes were determined by measurements; N,N-bishydroxy ethyl-glycine, imino-di-acetic acid, and N-hydroxy-ethyl imino di-acetic acid, with a number of di- and tri- valent central ions were studied. On this basis the probable structure and approximate constants of the stability of the complexes were determined. Substitution by hydroxy-ethyl group is discussed, and the character of the chelates prepared in this manner is described. Orig. art. has: 4 formulas, 6 graphs, 2 tables.

Card 1/2

MAJER, Jaroslav, doc. PhMr., C.Sc.; NOVAK, Vladimír, ing.; SVICEKOVÁ, Maria,
prom. farm.

New complexons. Pt. 2. Chem zvesti 18 no.7:481-492 1964.

1. Chair of Analytic Chemistry, Pharmaceutical Faculty, Comenius
University, Bratislava, ul. Odbojarov 12.

MAJER, J.

Identification of terminal groups of degraded polyoxymethylene.
Coll Cz Chem 29 no.12:3171-3173 D '64.

1. Research Institute of Macromolecular Chemistry, Brno.

L 1609-66

ACCESSION NR: AP5024487

ASSOCIATION: Katedra analytickej chemie Farmaceutickej fakulty Univerzity
Komenskeho, Bratislava (Department of Analytical Chemistry, Pharmaceutical
Faculty, Comenius University) 3

SUBMITTED: 29Sep63 447

ENCL: 00

SUB CODE: CC, CC

NR REF SOV: 000

OTHER: 016

JPRS

dy
Card 2/2

L 1609-66 EPF(c)/EWP(j)/T/EWA(c) RM

ACCESSION NR: AP5024487

CZ/0043/64/000/011/0813/0822 48/48

AUTHOR: Springer, V. (Shpringer, V.) (Graduate pharmacist) (Bratislava); Majer, J. (Mayer, Ya.) (Docent, Pharmacist, Candidate of sciences) (Bratislava) 44, 55

TITLE: Spectrophotometric investigation of the formation of chelates of the meso- and racemic forms of 2,3-diaminobutane with copper ions 1, 44, 55

SOURCE: Chemicke zvesti, no. 11, 1964, 813-822

TOPIC TAGS: spectrophotometric analysis, isomer, butane, amine, chelate compound, chemical absorption, absorption spectrum, copper, ion

ABSTRACT: Description of experimental results of a spectrophotometric investigation of the formation of the space isomers of 2,3-diaminobutane is presented. The composition of the chelates, their formation as a function of the pH, and the absorption spectra in the visible and ultraviolet region are discussed. The chelates of the Cu++ ion are violet in color; they have similar absorption spectra, absorption maxima, and absorption coefficients. Orig. art. has: 3 formulas, 8 graphs, 2 tables.

Card 1/2

JOMBIK, J.; MAJER, J.; SCHILLER, P.

Analytical methods based on reflection and absorption of radioactive radiation. II. Radiometric determination of ash in plant drugs. Cesk. farm. 13 no. 5:241-245 Je '64.

1. Katedra analytickej chimie Farmaceutickej fakulty UK, [University Komenskeho], Bratislava.

JOMBIK, Jozef; MAJER, Jaroslav; SCHILLER, Pavel

Radiometric determination of ash content in drugs.
Jaderna energie 10 no. 2:51-52 F '64.

1. Radioizotopove oddelenie Farmaceutickej fakulty
Univerzity Komenskeho, Bratislava.